In-Situ

SludgeWatch 715 Portable Sludge Blanket Detector

Operator's Manual

For a list of local compliance representatives, see www.in-situ.com/us/faq/regulatory-compliance/compliance-information/global-market-contacts

Technical Support

If you have questions or experience problems with your equipment, contact our skilled technical support team in your area by chat, email, or phone by going to www.in-situ.com/support.

Be sure to have the following information available:

- Product model
- Serial number
- Description of the problem, including how the product was used and the conditions noted at the time of the malfunction

Unpacking and Inspecting

Your equipment was carefully inspected before shipping. Check the equipment for any physical damage sustained during shipment. Notify In-Situ and file a claim with the carrier if there is any such damage; do not attempt to deploy or operate the equipment.

> ✓ Save packing materials for future storage and shipping of your equipment.

Document Conventions

Throughout this document, you will see the following symbols:

> ✓ A checkmark highlights a tip or feature.

> ⚠ The exclamation point calls your attention to a requirement, safety issue, or important action that should not be overlooked.

Contents

Introduction

Instrument Description

The SludgeWatch 715 Portable Sludge Blanket Detector is designed for spot-checking sludge interface levels in settling tanks.

It works by measuring the change in the level of suspended solids as the sensor is lowered into the tank. When the sensor reaches the sludge blanket, the audible signal changes from a fast beep to a slow beep. A red LED light visually indicates that the sludge blanket has been detected.

The sensor's cable is marked in either 1.0 m or 3.0 ft intervals to measure the sludge interface position.
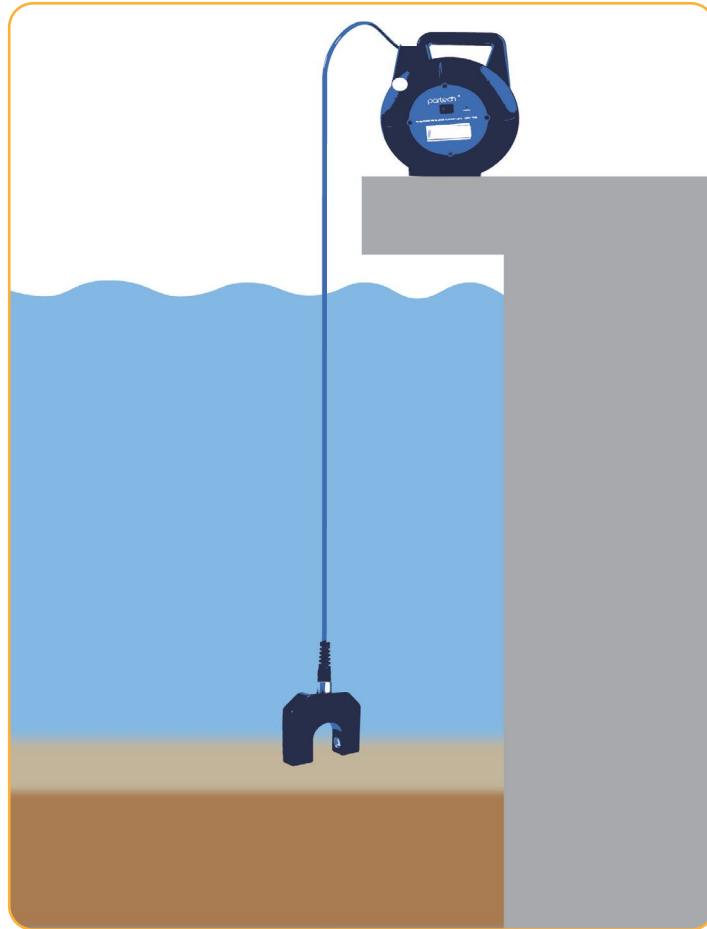
The SludgeWatch's sensor lowers into a settling tank to detect the sludge blanket at the bottom of the tank.

Instrument Details

The 715 consists of three main parts:

- the cable reel unit (which houses the detector's electronics and battery, and is also used to store the cable when not in use)
- the cable itself
- the IR sensor (attached to the bottom of the cable)

The IR sensor uses light absorption across a single measurement gap to determine the total suspended solids in a solution. The length of the sensing gap determines the measurement range of the sensor.

The sensor is available as an IR8, IR15, IR40, or IR100 sensor as required for the application.

Instrument Parts

1. Sensor
2. On/off switch
3. Cable reel handle
4. Cable
5. LED light
6. Battery compartment

SludgeWatch 715 Portable Sludge Blanket Detector

Box Contents

- SludgeWatch 715 Portable Sludge Blanket Detector
- 9 V alkaline battery

Getting Started

1 Conduct operation test before each use.

Insert battery. Move power switch to "on."
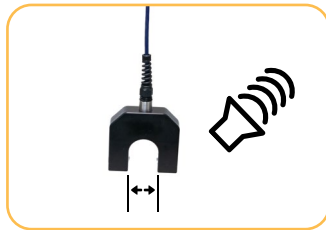
Ensure sensor gap is clear. Listen for fast beeps.

Check sensor. Block the gap. Listen for slow beeps. Identify bright LED light.

If test is successful, continue. If test fails, replace battery. Ensure sensor gap is clear.

2 Measure the sludge blanket.

Use the cable reel handle to slowly lower the sensor into settling tank.

When the beep changes from fast to slow and when the LED light flashes red, the sensor has reached the sludge blanket.

2.0 m
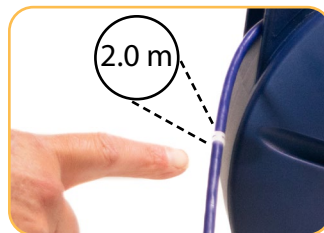
Record the sludge blanket's depth by noting the highest numerical measurement on the cable.

Switch unit off. Reel the cable in slowly, keeping it taut the entire time.

⚠️ Always keep the cable taut and reel slowly. Fast reeling can cause jamming.

3 Clean cable and sensor.

Use a damp cloth and mild detergent to clean the cable.

Clean sensor with a soft cloth and mild detergent. Rinse with clean water.

⚠️ Never fully immerse the entire SludgeWatch unit in liquid.

Learn More

View additional specifications, compliance information, and detailed instructions at www.in-situ.com.

Safety

⚠️ Read the safety information on this page before using the SludgeWatch 715 Portable Sludge Blanket Detector. If you have questions, contact In-Situ Technical Support for assistance.

- Submerge only the cable and sensor in liquid. Do not submerge the entire cable reel unit in liquid.
- Slowly reel the cable or the unit may jam.
- If the cable reel jams inside the housing unit, carefully free the cable by unwinding it.
- Use only mild detergent and clean water to clean the cable and sensor. Do not use harsh chemicals.
- Turn off the unit after use.

Intended Use

The SludgeWatch 715 Portable Sludge Blanket Detector is designed to be safe in these conditions:
- Operable temperatures of 0° to 50° C (32° to 122° F)

⚠️ If the equipment is used in a manner not specified by the manufacturer, the protection provided for the equipment may be impaired.

Technical Specifications

General Specifications

Battery Type	9 V DC (alkaline battery PP3)
Battery Life	>200 hours
Operating Temperature Range	0° to 50° C (32° to 122° F)
Storage Temperature Range	-20° to +60° C (-4° to +140° F)
Environmental Rating	IP65
Cable Type	4 core, polyurethane coated
Standard Cable Length	10.0 m (32.8 ft)
Maximum Cable Length	15.0 m (49.0 ft)
Cable Marking	1.0 m or 3.0 ft
Weight	1.7 kg (3.75 lbs)
Dimensions	280 x 230 x 130 mm (h x w x d) 11 x 9 x 5.1 in (h x w x d)
Measuring Principle	Light absorption
Light Source	Infrared LED, 950 nm
Protection Class	IP68 (Sensor), IP54 (Electronics)
Materials	Hastelloy, PVC, Epoxy Potting Compound

Sensor Specifications

✓ The values below are based on typical solids found in municipal sewage treatment plants.

Sensor Type	Dimensions	Range	Optical Path	Setpoint
IR100	95 x 100 x 25 mm (3.7 x 3.9 x .9 in)	0-200 mg/L	100 mm	100 mg/L
IR40	95 x 40 x 25 mm (3.7 x 1.6 x .9 in)	0-1500 mg/L	40 mm	750 mg/L
IR15	95 x 15 x 25 mm (3.7 x .6 x .9 in)	0-10,000 mg/L	15 mm	5,000 mg/L
IR8	95 x 8 x 25 mm (3.7 x .3 x .9 in)	0-30,000 mg/L	8 mm	15,000 mg/L

Serial Number & Part Numbers

Serial Number & Part Number Location

The instrument's part number (PN) is on the product label affixed to the instrument body. The serial number (SN) for the SludgeWatch main unit is on the back of the reel. The SN for the sensor is located on the sensor itself.

Sensor Type & Part Number

Sensor Type	Part Number
SludgeWatch 715 Portable c/w IR100 sensor (1.0 m marking)	107800
SludgeWatch 715 Port able c/w IR40 sensor (1.0 m marking)	230484
SludgeWatch 715 Portable c/w IR15 sensor (1.0 m marking)	107790
SludgeWatch 715 Portable c/w IR8 sensor (1.0 m marking)	141300
SludgeWatch 715 Portable c/w IR100 sensor (3.0 ft marking)	230475
SludgeWatch 715 Portable c/w IR40 sensor (3.0 ft marking)	230473
SludgeWatch 715 Portable c/w IR15 sensor (3.0 ft marking)	230474
SludgeWatch 715 Portable c/w IR8 sensor (3.0 ft marking)	230476

UKCA Declaration of Similarity

Manufacturer: Partech Electronics Ltd.
St Austell, Cornwall, PL26 8RA, United Kingdom

Declares that the following product is similar in performance to the SludgeWatch 715 Portable with IR40 Sensor:

Product name: **SludgeWatch 715 Portable with IR100 Sensors**
Model: **SludgeWatch 715 Portable with IR100 Sensors**
Part Numbers: **107800, 230475**
Model Variants: One model variant has a cable length of 10m/32.8 ft and one has a cable length of 32 ft with markings every ft.
Product Description: The SludgeWatch 715 provides a simple method of spot checking the sludge blanket level in a wide variety of settlement tanks. The sensor is attached to a reel making the unit portable. This is used primarily at wastewater treatment plants.

is in compliance with the following Regulations:
- EMC Regulation 2016
- Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) Regulation (S.I. 2012:3032)

and meets or exceeds the following British requirements and compliance standards:

- **EMC:** BS 61326-1:2021

- **RoHS:** BS 63000:2018

The UKCA mark is affixed accordingly.

David A. Bossie
Regulatory Compliance Manager
In-Situ, Inc.
July 13, 2022

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221 East Lincoln Avenue, Fort Collins, CO 80524 USA
Toll Free: 800.446.7488   **Tel:** 970.498.1500   **Fax:** 970.498.1598

CE Declaration of Similarity

Manufacturer: Partech Electronics Ltd.
       St Austell, Cornwall, PL26 8RA, United Kingdom

Declares that the following product is similar in performance to the SludgeWatch 715 Portable with IR40 Sensor:
Product name: **SludgeWatch 715 Portable with IR100 Sensors**
Model: **SludgeWatch 715 Portable with IR100 Sensors**
Part Numbers: **107800, 230475**
Model Variants: One model variant has a cable length of 10m/32.8 ft and one has a cable length of 32 ft with markings every ft.
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- 2014/30/EU EMC Directive
- Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) Directive, 2011/65/EU and Commission Delegated Directive, (EU) 2015/863

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RoHS Standard:
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Product name: **SludgeWatch 715 Portable with IR15 Sensors**
Model: **SludgeWatch 715 Portable with IR15 Sensors**
Part Numbers: **107790, 230474**
Model Variants: One model variant has a cable length of 10m/32.8 ft and one has a cable length of 32 ft with markings every ft.
Product Description: The SludgeWatch 715 provides a simple method of spot checking the sludge blanket level in a wide variety of settlement tanks. The sensor is attached to a reel making the unit portable. This is used primarily at wastewater treatment plants.

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UKCA Declaration of Conformity

Manufacturer: Partech Electronics Ltd.

St Austell, Cornwall, PL26 8RA, United Kingdom

Declares that the following product:

Product name: **SludgeWatch 715 Portable with IR40 Sensors**

Model: **SludgeWatch 715 Portable with IR40 Sensors**

Part Numbers: **100610, 230473**

Model Variants: One model variant has a cable length of 10m/32.8 ft and one has a cable length of 32 ft with markings every ft.

Product Description: The SludgeWatch 715 provides a simple method of spot checking the sludge blanket level in a wide variety of settlement tanks. The sensor is attached to a reel making the unit portable. This is used primarily at wastewater treatment plants.

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Declares that the following product is similar in performance to the SludgeWatch 715 Portable with IR40 Sensor:

Product name: **SludgeWatch 715 Portable with IR8 Sensors**
Model: **SludgeWatch 715 Portable with IR8 Sensors**
Part Numbers: **141300, 230476**
Model Variants: One model variant has a cable length of 10m/32.8 ft and one has a cable length of 32 ft with markings every ft.
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RoHS Standard:
EN 63000:2018

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David A. Bossie
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UKCA Declaration of Similarity

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Model: **SludgeWatch 715 Portable with IR8 Sensors**
Part Numbers: **141300, 230476**
Model Variants: One model variant has a cable length of 10m/32.8 ft and one has a cable length of 32 ft with markings every ft.
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